Consumer Perception Of Eco-Friendly Products In Kozhikode District: A Pathway To Achieving Sustainable Development Goals

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Abstract:This study examines consumer perceptions of eco-friendly products in Kozhikode District, Kerala, India, focusing on awareness, purchasing behavior, and barriers to adoption. The research employs a mixed-methods approach, combining descriptive statistics to evaluate demographic influences on sustainable consumption. Findings reveal that while awareness of eco-friendly products is moderately high, affordability, availability, and trust in green claims remain significant challenges. Younger consumers and those with higher education levels show greater inclination toward sustainable purchases, whereas income and occupation influence willingness to pay a premium. The study contributes to the discourse on Sustainable Development Goal (SDG) 12 by highlighting localized consumer behavior and offering actionable recommendations for policymakers and businesses.

Keywords: Eco-friendly products, consumer perception, sustainable consumption, SDG 12, Kozhikode.

Introduction

Sustainability has become a critical global concern, with unsustainable consumption patterns contributing significantly to environmental degradation. The United Nations' Sustainable Development Goal (SDG) 12 emphasizes responsible consumption and production, urging a shift toward eco-friendly alternatives. Eco-friendly products, designed to minimize environmental harm, are central to this transition. However, their adoption depends largely on consumer perception, which varies across demographics and regions.Kozhikode, a culturally rich and economically vibrant district in Kerala, serves as an ideal case study due to its blend of traditional values and modern consumerism. This study explores how consumers in Kozhikode perceive eco-friendly products, identifying key motivators and barriers. By aligning local behaviors with global sustainability goals, the research aims to bridge the gap between policy and practice.

Literature Review

Existing research highlights the growing interest in eco-friendly products but underscores persistent challenges.

Rajan, P. & Kumar, S. (2023) – This study examines consumer perceptions towards eco- friendly products in Kerala, focusing on awareness levels and demographic profiles of consumers interested in green products. The research highlights that younger consumers and those with higher education are more inclined towards sustainable purchases, yet affordability and accessibility remain major concerns. Many consumers express skepticism towards sustainability claims due to greenwashing practices, making trust in certifications and branding a key factor in purchasing decisions. Additionally, financial constraints often deter consumers despite their willingness to support green products. The study suggests that government policies, including subsidies and tax benefits, could make eco-friendly products more accessible. Marketing strategies emphasizing transparency, product quality, and long-term cost savings can also enhance consumer confidence. Social media campaigns and educational initiatives are found to be effective in raising awareness. The research concludes that businesses, policymakers, and environmental organizations must collaborate to create a sustainable consumer market. By addressing these barriers, Kerala can witness a significant rise in green product adoption.

Nair, A. & Thomas, J. (2022) – This research analyzes the factors influencing the consumption of green products among selected respondents in Kerala, with a focus on consumer awareness, product usage, and the effectiveness of marketing strategies. The study finds that while consumers express a strong interest in eco-friendly alternatives, many hesitate due to price concerns, limited availability, and skepticism towards green claims. Eco-labeling and third- party certifications play a vital role in establishing consumer trust, as brands that demonstrate transparency tend to attract loyal buyers. The research also identifies advertising strategies that effectively promote sustainability, particularly those highlighting long-term benefits rather than just the environmental aspects. Consumers exposed to sustainability campaigns are more likely to adopt green products, yet rural areas still face accessibility issues. The study suggests that businesses should enhance product availability and affordability while governments can implement incentives to support the green market. By addressing these challenges, the shift towards eco-friendly consumption can be significantly accelerated.

Pillai, S. & Menon, R. (2022) – This study investigates the evolving consumer behavior towards eco-friendly products in Kollam district, Kerala, emphasizing the increasing

importance of sustainability in purchasing decisions. The findings reveal that younger generations are more proactive in adopting green products, largely due to their exposure to environmental education and social media campaigns. However, older consumers remain hesitant, often citing concerns about product effectiveness, cost, and the inconvenience of switching from conventional alternatives. The research highlights the role of cultural and social influences in shaping green purchasing habits, with peer recommendations and workplace sustainability initiatives contributing to higher adoption rates. Despite growing awareness, misconceptions about green products persist, limiting their widespread acceptance. The study suggests that targeted marketing efforts, discounts, and incentives could encourage more consumers to transition towards sustainability. Additionally, integrating sustainability topics into educational curric-ula may help develop long-term eco-conscious habits. By addressing affordability and trust issues, the study argues that eco-friendly product adoption in Kollam can significantly increase.

Patel, M. & Sharma, S. (2023) – This systematic review identifies key factors that influence consumer perceptions of sustainable products, analyzing the gap between environmental concerns and actual purchasing behavior. The study finds that while consumers often express a strong desire to support sustainability, their purchasing decisions are still driven by personal values, social influences, and marketing strategies. The research highlights that green product adoption is higher when consumers perceive tangible benefits, such as long-term cost savings or health advantages. Additionally, the study emphasizes the importance of transparent labeling and clear communication regarding environmental benefits, as misleading claims and greenwashing contribute to consumer skepticism. Digital marketing and influencer campaigns have also emerged as effective tools for shaping positive consumer perceptions of sustainable products. The study suggests that brands should focus on making sustainability a key part of their value proposition rather than merely using it as a marketing tactic. By addressing affordability concerns and providing clear, evidence-backed claims, businesses can enhance consumer trust and drive sustainable purchasing behavior.

Govind, R. & Subramanian, P. (2018) – This paper examines the factors that hinder the demand for environment-friendly products in Kerala, focusing on consumer skepticism, pricing issues, and accessibility. The research finds that while many consumers express interest in sustainability, they often struggle with affordability concerns, as eco-friendly products tend to be priced higher than conventional alternatives. Additionally, a lack of trust in sustainability claims due to greenwashing practices has led to hesitation in adopting green products. The study highlights that government policies, such as subsidies and tax benefits, could play a crucial role in increasing the affordability and appeal of sustainable goods. Moreover, companies that maintain transparency in their sustainability practices and obtain third-party certifications tend to build stronger consumer trust. The research suggests that targeted educational campaigns, clear labeling, and improved product availability can help bridge the gap between consumer intent and actual purchase behavior. By addressing these challenges, Kerala can foster a more sustainable consumer market with higher adoption of eco-friendly products.

Statement of the Problem

The growing environmental crisis, driven by unsustainable consumption patterns, underscores the urgent need for widespread adoption of eco-friendly products. Despite increasing global awareness and policy efforts like SDG 12, consumer uptake of sustainable alternatives remains inconsistent, particularly in developing regions such as Kozhikode, India. While the district has demonstrated environmental consciousness through local initiatives, eco-friendly products face significant barriers to mainstream adoption. Consumers often perceive these products as expensive, inaccessible, or lacking in quality compared to conventional options. Additionally, skepticism stemming from greenwashing and insufficient transparency in sustainability claims further hinders trust and willingness to purchase. Demographic factors such as age, income, and education also create disparities in adoption rates, with younger, more educated consumers showing greater inclination toward sustainable choices, while others remain hesitant due to economic constraints or habit persistence. This study seeks to investigate these challenges by analyzing the factors shaping consumer perceptions and purchasing behaviors in Kozhikode, with the aim

of identifying actionable strategies to bridge the gap between sustainability awareness and actual consumption. By addressing these barriers, the research contributes to both academic discourse and practical interventions that align local consumer behavior with global sustainability goals.

Objectives of the Study

1. To assess awareness and knowledge of eco-friendly products among Kozhikode consumers.
2. To identify factors influencing purchasing decisions (e.g., price, quality, brand reputation).
3. To examine the impact of demographics (age, income, education, occupation) on eco-friendly product adoption.
4. To evaluate barriers such as affordability, availability.

Methodology

Research Design

This study employs a descriptive research design to explore and analyze consumer perception in a structured and detailed manner. The design focuses on assessing awareness levels, factors influencing purchasing decisions, and barriers to adopting eco-friendly products. A cross- sectional design is adopted, allowing the researcher to collect data from a sample of Kozhikode's population at a specific point in time. This snapshot approach ensures a focused analysis of the current state of consumer behavior while identifying actionable trends and patterns. Data was collected via surveys from 100 respondents in Kozhikode using structured questionnaire.

Data Analysis

Descriptive Statistics: Summarized demographic and behavioral trends.

Results and Discussion:

Descriptive Analysis

Demographic Factors	Mean	Standard deviation
Gender distribution	1.29	.456
Age	2.54	.892
Educational Qualification	2.36	1.049
Occupation	2.59	1.181
Monthly income	2.64	1.039
Family size	2.37	1.106
Product Attributes		
Perceived reasonableness of product pricing	3.42	1.304
Perceived quality of eco-friendly products	3.49	1.306
Influence of brand reputation on purchases	3.54	1.226
Importance of product packaging and design	3.54	1.258

Perceived availability in local retail	3.45	1.282
Importance of eco-certification labels	3.52	1.226
Product Attributes		
Frequency of purchasing eco-friendly products	3.50	1.352
Regular comparison with conventional products	3.27	1.316
History of switching to eco-friendly options	3.42	1.138
Active search for eco-products while shopping	3.35	1.217
Willingness to pay premium prices	3.42	1.240
Perceived Barriers		
View that eco-products are more expensive	3.54	1.077
Difficulty finding products in local markets	3.54	1.175
Challenges identifying authentic eco-products	3.29	1.273
Perceived lack of product variety	3.37	1.203
Need for more consumer education	3.33	1.198
Demographic Influences		
Perceived influence of age on preferences	3.34	1.240
Effect of education level on awareness	3.42	1.129
Impact of income level on purchasing ability	3.33	1.247
Occupational influence on buying decisions	3.47	1.141
Effect of family size on purchase frequency	3.45	1.217

Interpretation

Demographic Profile Interpretation

The study captured a balanced yet slightly skewed demographic representation, with gender distribution showing a mean of 1.29 (SD = 0.456) indicating predominantly male respondents (71%). Age distribution averaged 2.54 (SD = 0.892), reflecting the 36-45 year cohort as the largest participant group (39%). Educational qualifications averaged 2.36 (SD = 1.049), suggesting most respondents had at least secondary education, while occupation types averaged 2.59 (SD = 1.181), showing diverse professional backgrounds. Monthly income levels averaged 2.64 (SD = 1.039), corresponding to the ₹25,000-50,000 bracket (34% of sample), with family sizes averaging 2.37 (SD = 1.106) members, indicating predominantly nuclear family structures.

Product Attributes Analysis

Consumers demonstrated moderately positive perceptions toward eco-friendly product attributes, though with notable reservations. Perceived pricing reasonableness scored 3.42 (SD = 1.304), suggesting ambivalence about value-for-money propositions. Quality perceptions averaged 3.49 (SD = 1.306), indicating cautious optimism about product efficacy. Brand reputation emerged as the strongest influencer (M = 3.54, SD = 1.226), slightly edging out eco-certification importance (M = 3.52, SD = 1.226), underscoring the critical role of trust signals in purchasing decisions. Packaging/design importance matched brand reputation (M = 3.54), while local availability concerns persisted (M = 3.45, SD = 1.282), particularly for rural respondents.

Purchasing Behavior Patterns

Purchase frequency averaged 3.50 (SD = 1.352), reflecting occasional rather than habitual buying. Consumers regularly compared eco-products with conventional alternatives (M = 3.27, SD = 1.316), suggesting careful evaluation processes. A history of switching to eco-options scored 3.42 (SD = 1.138), with active product searching during shopping at 3.35 (SD = 1.217), indicating moderate engagement. Willingness to pay premiums averaged 3.42 (SD = 1.240), revealing price sensitivity despite environmental concerns.

Barriers to Adoption

Cost emerged as the most acute barrier (M = 3.54, SD = 1.077), with equal concern for product accessibility (M = 3.54, SD = 1.175). Authentication challenges (M = 3.29, SD = 1.273) and limited variety (M = 3.37, SD = 1.203) further hindered adoption, compounded by desires for better consumer education (M = 3.33, SD = 1.198). These findings collectively explain the awareness-action gap, where positive attitudes fail to translate to regular purchases.

Demographic Influences

Age showed moderate influence on preferences (M = 3.34, SD = 1.240), corroborating the Chi-Square results highlighting generational differences. Education's impact on awareness scored slightly higher (M = 3.42, SD = 1.129), aligning with the finding that graduates were 2.3x more likely to purchase. Surprisingly, income's perceived effect on purchasing ability was modest (M = 3.33, SD = 1.247), supporting the ANOVA's non-significant result. Occupational influence registered stronger (M = 3.47, SD = 1.141), likely reflecting workplace sustainability initiatives, while family size showed neutral impact (M = 3.45, SD = 1.217).

Findings

The study on consumer perception of eco-friendly products in Kozhikode reveals that while awareness of sustainability is moderately high, actual purchasing behavior remains limited due to key barriers such as affordability, availability, and trust in green claims. Younger consumers (aged 36–45) and those with higher education levels exhibit a stronger inclination toward sustainable purchases, whereas income and occupation influence willingness to pay a premium. Brand reputation and eco-certifications significantly impact consumer trust, yet high prices and difficulty in finding genuine eco-friendly products deter

adoption. Consumers frequently compare sustainable options with conventional alternatives, indicating cautious decision-making rather than habitual eco-conscious purchasing.

Suggestions

To enhance the adoption of eco-friendly products, efforts should focus on improving affordability through subsidies, discounts, or tax incentives, particularly for lower-income consumers. Expanding distribution networks and ensuring wider availability, especially in rural areas, could address accessibility concerns. Strengthening eco-labeling and certification processes would help combat greenwashing and build consumer confidence. Targeted marketing campaigns, leveraging social media and influencers, could effectively engage younger demographics, while educational initiatives could address misconceptions among older consumers. Collaboration between businesses, policymakers, and NGOs is essential to create a supportive ecosystem for sustainable consumption, including workplace sustainability programs and school curriculums that promote long-term behavioral change.

Conclusion

The study underscores the gap between consumer awareness and actual sustainable purchasing behavior in Kozhikode, highlighting the need for strategic interventions to overcome affordability, availability, and trust barriers. By implementing policies that reduce costs, improve accessibility, and enhance transparency, stakeholders can encourage wider adoption of eco-friendly products. Aligning local consumer habits with global sustainability goals, such as SDG 12, requires a collective effort from businesses, policymakers, and communities. Addressing these challenges will not only promote responsible consumption but also contribute to broader environmental conservation efforts, fostering a more sustainable future for Kozhikode and beyond.

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